

Abstract

**POROUS INORGANIC MACROSTRUCTURE MATERIALS
AND PROCESS FOR THEIR PREPARATION**

There is provided macrostructures of porous inorganic material which can
5 have controlled size, shape, and/or porosity and a process for preparing the
macrostructures. The macrostructures comprise a three-dimension network of
particles of porous inorganic materials. The process for preparing the
macrostructures involves forming an admixture containing a porous organic ion
exchanger and a synthesis mixture capable of forming a porous inorganic material
10 and then converting the synthesis mixture to a solid porous inorganic material.
After formation of the composite material, the porous organic ion exchanger can
be removed from the composite material to obtain the macrostructures, either
before or after the porous inorganic material is hydrothermally treated with a
structure directing agent to convert at least a portion of such porous inorganic
15 material to a crystalline molecular sieve composition. The resulting
macrostructure is composed of particles of the crystalline molecular sieve
composition.